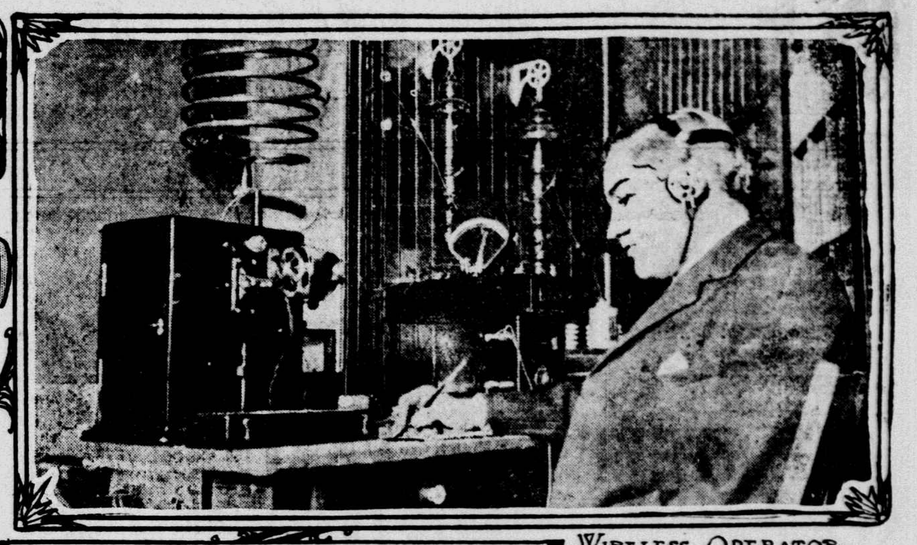
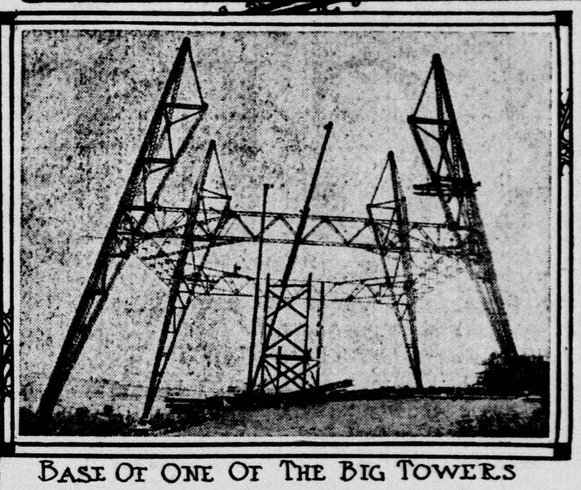
To Overhaul the Wireless Under Strict Government Regulation



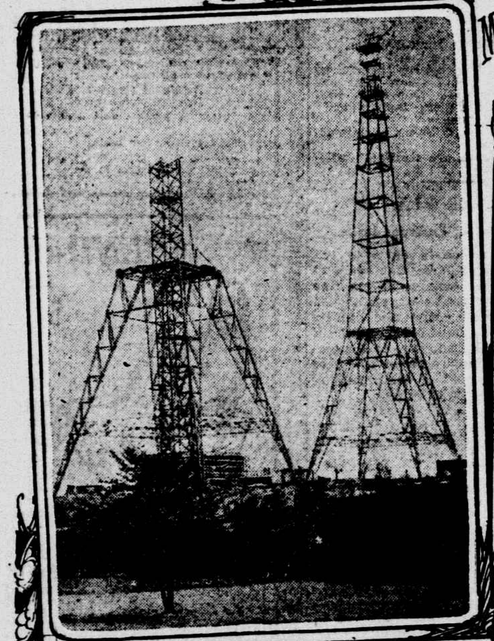
Our Congress at Washington and an International Parliament to Meet Next Month in London Will Make Commercial Companies Toe the Mark—Lessons of Titanic Tragedy to Result in Radical Reforms—No More Confusion, Interference or Commercial High-handedness—Amateurs to Be Curbed—A Standard "Distress Wave" to Be Adopted, Also a Universal Distress Signal—All Ships and Shore Stations Must Be Equipped With Emergency Receivers Tuned to Catch Calls for Help—These Ears Will Maintain Eternal Vigilance for Distress Cries Coming Over the Deep—Will Be Mounted on Eiffel Towers to Stretch in a Vast Chain From the Philippines to Washington—Uncle Sam Will Be the Wireless Monarch of Both Oceans and Three-fourths of Earth's Circumference.

GROUP OF NAVAL WIRELESS OPERATORS.

REAR ADMIRAL CONE IN CHARGE NAVAL WIRELESS CORPS



BASE OF ONE OF THE BIG TOWERS



BUILDING THE GIANT WIRELESS TOWERS AT ARLINGTON VA.

WIRELESS SHORE STATION U.S. NAVY.

BY JOHN ELFRETH WATKINS.

THE terrible Titanic tragedy will confer one benefit upon humanity. It will emancipate the wireless telegraph from the arbitrary power of commercialism and place it under strict governmental regulation, assuring eternal vigilance for distress calls at sea, absolute precedence for such signals for help and better equipment for their utterance.

The Congress of the United States is now at work upon and a parliament of the great nations of earth will next month be engaged upon rigid laws to prevent, in future, such a babel of wireless tongues, such a feebleness of wireless ears, such interference by meddlesome wireless amateurs, and such greed of wireless commercial interests as contributed to the suspense, the horror and the death toll of old ocean's most monstrous tragedy.

* * *

New legislation for the "regulation of radio communication" has lately been reported favorably to both houses of Congress. It is carried in a bill carefully framed by the wireless experts of the navy, army and Department of Commerce and Labor. It is designed to put a quietus upon the long-threatening monopoly of all the powerful wireless interests not only of America, but of the world; to give distress calls from the sea an absolute right of way; to prevent the interference of commercial messages with official and emergency messages.

The first step toward giving the federal government an actual hold upon all wireless stations in our territory or upon our ships will be a strict requirement that each station and all of its operators must obtain a federal license; also that all operators must be American citizens.

To prevent interference with government or distress messages each commercial station will be limited by its license to certain "wave lengths" for carrying its messages, also to certain hours of work. Under the existing system operators send out their dots and dashes upon electric waves varying in length, generally, from 100 to 6,000 meters—a meter being very nearly a yard. To get clear results sending and receiving instruments must be adjusted, or "tuned" to the same limits of wave length.

The government will tune all of its instruments to receive and send only waves that are between 600 and 1,600 meters in length, and will prosecute any private or commercial concern which trespasses within these limits. Such concerns will be allowed to tune their instruments above and below these pitches, but will be prevented from monopolizing too great ranges of wave length when certain narrow ranges will serve their purposes just as well.

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A "standard distress wave" for ships is one of the most important provisions of the bill. A wave length of 300 meters must be uniformly reserved for this emergency call by all wireless stations, official, commercial or private, on sea or on land. Each passenger-carrying vessel will be required to keep in operation, day and night, an extra instrument tuned to maintain eternal vigilance for calls for help that may come moaning over the relentless deep. This emergency ear will be known as a "special distress receiver," and the government's experts seek strict legislation requiring such apparatus beside the quartermaster or lookout of every ship; also that all men employed at the wheel or upon watch shall be adequately trained to distinguish the international distress call, "S. O. S.," whenever this special instrument utters it.

This distress call, instead of the old "C. Q. D." of Jack Binns fame, the bill adopts for America. It will be remembered that the Titanic's operators used both signals while she was going down. The "S. O. S." has been adopted by other countries because its three dots, three dashes and three dots (... — — — ...) compose a signal readily distinguishable even by the untrained ear. While, therefore, not chosen because it abbreviates any words, sailors fix "S. O. S." in their minds as meaning "save our ship."

Each ship and shore station must be equipped to utter as well as to receive this cry for help, day and night, over a distance of at least 100 miles. "Absolute priority" is given to "signals and radiograms relating to ships in distress;" and all wireless stations afloat or ashore are required to cease all sending when they hear a distress call. Except when answering or aiding a vessel thus appealing for help they must refrain from sending until all wireless business relating to the emergency has been completed.

* * *

To prevent ships unnecessarily interrupting wireless business of shore stations near great seaports it will be required that they reduce the electrical energy of their transmitters upon approaching within fifteen miles and that they reduce it still further when within five miles. Ship and shore stations will be bound to interchange messages whether employing the same wireless systems or not. And at important ports where commercial wireless business interferes with the wireless work of military and naval stations the first fifteen minutes of each hour will be reserved for Uncle Sam's radiograms—a division of time which will be demanded, however, only after other means of preventing interference have failed.

Distress signals are made an exception to this rule, as well as to another—that wireless stations must use only the minimum strength of electrical energy necessary to carry their messages to the distance required.

That interfering amateurs were partly responsible for the confusion of wireless tongues that added to the public suspense following the Titanic catstrophe has been frequently charged. The bill before Congress puts a curb upon amateurs and all other wireless enthusiasts not engaged in bona fide commercial transmission. They will be restricted to a low electric power and a short wave length—200 meters. This limit the bill's framers deem sufficient for all purposes of amusement or instruction and will carry messages over a large city area.

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As attested by the variously poised wireless masts which detract from the beauty of many residential sections of our cities and towns, there now are thousands of these wireless amateurs scattered through the country and the government realizes that some valuable operators are sometimes developed by this diversion. So, to encourage those who are really serious in their activities and who develop improvement in their art, there is a provision in the measure allowing these to test their skill under a special temporary license, which, during certain hours will waive restrictions as to power and wave lengths.

To further prevent interference with official wireless business the measure forbids the erection of future commercial wireless stations within fifteen nautical miles of a list of important naval and military stations, not including, however, those at our most important commercial centers.

These protected points are to be especially a great chain of "high power" radio stations, which will give America wireless dominion over the seas. The key to this vast system will be a group of giant towers already bristling above the hills of Arlington, Va., in full view of the National Capital's avenues. The tallest of these steel structures will rise 650 feet from the ground, which means that from base to pinnacle it will be 95 feet higher than the Washington Monument itself, and as the hill which this steel steeple will crown is higher than the stately monolith dedicated to the father of his country the wireless reach of this high-power station will be vastly greater than could be obtained from the Monument's aluminum apex.

* * *

By all odds, this will be the tallest tower ever built for wireless purposes in any part of the world. It will be 150 feet square at the base and between its spreading legs could easily be built four blocks of average city residences, allowing seven houses to the block. To the east of this colossus and at equal distances therefrom will stand two similar pinnacles of steel, each 450 feet high and 120 feet square at the base, and the group when completed will look very like three Eiffel towers, although, acting together, they will have far greater wireless reach than the famed Paris giant, lately converted into a wireless station.

From the tiptop of the highest to the apex of each of the lower towers will fall a cable 400 feet long and another such cord of steel, 800 feet in length, will sag between the crests of the twin structures. Upon these great ropes of wire Uncle Sam will spread his giant nets which are to gather from the heavens distress signals and other wireless messages flashed from as far west as San Francisco, as far east as the African leg o' mutton, and from anywhere between Panama's big ditch to Greenland's icy mountains. These nets, or "antennae," will consist of a half-dozen seventy-two-foot "spreaders," each supporting a giant harp of nineteen wires, four feet apart.

Just in front of the pair of smaller towers are rising two connected buildings containing living quarters and a kitchen for twenty operators; also two modern wireless laboratories, a machine shop, power room, engine room, storage room and operating room. The towers will cost $110,000 and the building $70,000.

A commissioned officer of the navy will be detailed to command this station, just as though it were a ship. By land wires it will communicate with the desk of the President or with the Navy Department as promptly and directly as though it were erected upon the roof of the White House or the State, War and Navy building. In time of war the President and his cabinet could speak, through this station, with our ships and armies in almost any corner of the world.

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Indeed, the vast chain of high-power stations of which this, at Arlington, will be the key will be more tremendous in scope than any similar system planned or dreamed of by any other nation on earth.

The three bristling towers upon the Potomac will communicate directly with a similar group 2,117 miles away at San Francisco and still another 1,780 miles away upon the Canal Zone and visible leagues and leagues across both oceans. And inasmuch as each of these stations will have a range of at least 3,000 miles, their dots and dashes will be hurled against Africa's sandy shore with little difficulty. Each will also bombard a similar group of towers at Pearl Harbor, Hawaii, and this station in the isle of hula girls will reload the dots and dashes and shoot them over to a like set of triple towers erected at Guam and American Samoa. Then Guam will wad them into its electric gun and aim the fusillade upon the Philippines, where still another set of these steel spires will crown a palm-clad hill of Luzon. And the Luzon station in its turn can fire the messages as far as central India or the restless heart of the new Chinese republic. Were there such a station in these oriental regions, as well as upon Africa's sunny shore the system would belt the world. So far as it goes, it will be known as the International Radio-Telegraphic Convention, and it will sit in London. President Taft will send delegates who know every wireless problem from A to Z. They will co-operate with representatives of other nations in framing regulations which will require every ship of every flag to adopt the standard distress signal, distress wave and distress receiver of 100-mile range, and will require universal use of what are known as "pure" and "sharp" waves. The Titanic tragedy will suggest to this parliament many reforms whose need would not have otherwise presented themselves.

WIRELESS OPERATOR ON SHIPBOARD

Washington, whether cables are cut or not. Washington will talk directly with the entire north Atlantic ocean, instead of relaying its messages, as now, through Norfolk or Key West. Similarly, Panama will be made the key to the entire south Atlantic, Samoa the key to the south Pacific, Hawaii the key to nearly the whole Pacific; Guam, to the west Pacific; Manila, to the waters of China, Asiatic Russia and of our rival, Japan. Communication directly across our continent, from Washington to San Francisco, will be instantaneous, whereas today the commercial land wires must be depended upon. From his sanctum the President will be able to talk with his ships scattered anywhere between the Canary Islands and the China sea.

He will be able to distribute distress calls among all ships within 2,000 miles of one of these high-power stations at night, or within 1,000 miles during the day. He will be unable, however, to hear distress calls sent to him by ships farther away than 400 miles at night or 200 miles during daylight. But he will have upward of fifty small wireless stations and countless ship stations co-operating with these high-power wireless plants, and the former will relay emergency messages to the nearest group of giant towers.

* * *

These differences in range for night and day are due to the fact that the sunlight greatly absorbs the wireless electric waves. The government experts regard the natural conditions surrounding the Titanic as especially favorable to a long wireless range on the night she sank, not only because it was dark, but because it was cold weather. Winter, as well as darkness, increases the reach of these fickle dots and dashes.

As old Mother Earth puts on more and more of her spring attire the reach of wireless messages shortens. In their laboratory, at Washington, the navy's experts are now experimenting to accurately measure this effect of increasing foliage and vegetation. While the summer is coming on they are receiving test messages sent at regular intervals from Philadelphia, Annapolis and Norfolk, and with delicate instruments are noting the gradual weakening of the electric current. Thus, you might say, they are hearing the grass grow and the May blossoms burst from their buds. And all of this work has a direct bearing upon the saving of life at sea. Because of the ever-present foliage on the surrounding land, ships in the tropics cannot send their distress signals over more than half the range which vessels in the temperate zones can cover.

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The great chain of high-power stations described will be constructed under the direction of Rear Admiral Hutch I. Cone, U. S. N. The entire series, when completed, will have cost a million dollars and each group of towers as well as the fifty-odd small stations co-operating with the series will be equipped with special distress receivers kept as eternally alive as were the temple fires of the Vestal virgins.

As suggested above, all of the enlightened nations of the world are next month to meet in a parliament which will give wireless business a universal overhauling and require commercial companies to toe a mark that is narrow and straight. This body will be known as the International Radio-Telegraphic Convention, and it will sit in London. President Taft will send delegates who know every wireless problem from A to Z. They will co-operate with representatives of other nations in framing regulations which will require every ship of every flag to adopt the standard distress signal, distress wave and distress receiver of 100-mile range, and will require universal use of what are known as "pure" and "sharp" waves. The Titanic tragedy will suggest to this parliament many reforms whose need would not have otherwise presented themselves.

Mothers' Day, New With Us, But Old in England

THIS year the observance of Mothers' day is to be general throughout our land, for nearly every state governor has requested or declared that today, the second Sunday in May, shall be set apart and celebrated in tribute to the mothers of the nation. Perhaps no other movement has ever won its way into the hearts of the American people in such a short time. It is reasonable to believe that even Miss Anna Jarvis of Philadelphia, the founder and president of the Mothers' Day International Association, feels that her expectations have been bettered by the ready response of those in other countries to look upon today as a compliment to mother. Originating in America, the idea has traveled and taken root in parts of Alaska, Korea, China, Japan, the Fiji Islands, Barbados, Australia, Africa, Madagascar and Palestine.

The white carnation, chosen to symbolize this special Sunday, is generally considered a most appropriate flower. The sweet, spicy, sturdy flower is noted for its endurance as truly as for its sweetness, and such may be said of mother's love. Probably it is the novelty of honoring our maternal parents with a Mothers' day that has given the plan its thrilling growth in the United States, but in England this respect has been shown for over two centuries, as "Mothering Sunday" across the sea is an observance of ancient origin.

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The harshness and monotony of life in olden times was relieved in many simple and homely ways, which originated numerous affectionate customs, since crowded out by the ambitious strugglings of a new era. In England, where the rules and customs of the established church have ever been a binding tie upon the people, most of the holidays have been the outgrowth of religious observances; and so it was that "Mothering Sunday" became a fixture on the calendar as identical with the fourth Sunday in Lent. On that day families became reunited under their parents' roof, though in many cases this was not easily accomplished. Years ago public schools were fewer and less excellent in their training than they are today. For this reason there was a popular habit of sending sons and daughters away to such boarding schools as "Dotheboys Hall," immortalized by Dickens, and so the family circle was often broken by the absence of the children.

Other hearthstones were saddened because of the young men being apprenticed to masters in distant cities, for learning any kind of a business has always been considered most seriously in the United Kingdom. Those who wished to be recognized as either proficient lawclerks or mechanics had to serve their apprenticeship. Some families were separated because their daughters entered the service of persons in higher social circles, while many old homesteads of all classes seemed deserted after the younger generation left the old homes to make new ones for themselves. Whatever the cause of separation, nothing hindered the reunion on Mothering Sunday, for neither schoolmaster, foreman nor employer of any rank could withhold his consent from allowing those in his charge or service the pleasure of making their annual visit to their own homes on that Sunday.

* * *

Usually the children took little presents, such as cakes or trinkets, on this trip when they went "mothering," as it was called. The excitement of procuring some novel or surprising gift for mother brightened the lives of the young striplings or maidens who had gone to service or who had started out as independent housekeepers. In such parts of England as Shropshire, Herfordshire and Shrewsbury "simnel cakes" were usually taken to the old home as a token of love of mother. These confections, which sold from about 75 cents to nearly $5 in our money, were rich and expensive, and they were made especially for the occasion. The outer crust, which was made of the finest of flour, and colored a deep yellow with saffron, was filled with a material of very rich plum cake, thick in its generous quantity of candied lemon peel and other goodies.

When this mixture was prepared it was tied in a cloth and boiled several hours. Then it was taken out, brushed over with egg and baked. On account of all of this cooking, the crust was as hard as wood. It is said that when a person who had never seen one of these cakes received a "simnel" as a present she ordered it to be boiled to soften it, while another lady mistook her cake for a footstool. In the early part of the seventeenth century the cakes were ornamented with fancy bordered crusts and cuts across the top, but in more remote times biblical pictures were used as the top decoration.

Just how the name "simnel" came to be applied to these delicacies of Mothering Sunday is not known, but the old folklore offers many explanations. One story is that the father of Lambert Simnel, the celebrated pretender in the reign of Henry VIII, was a baker and the originator of the cakes. Lambert's admirers flattered the ancient baker by reasoning that on account of the notoriety gained by the young man the cakes were named after him.

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The Shropshire people disagree with this story, for they explain the origin of the name in a more interesting way. They say that long ago an honest old couple whose Christian names were Simon and Nellie lived among them. Every year at about Easter they gathered their sons and daughters under their old roof. One year as the Lenten season was just ending and the old couple were preparing for the coming visit of their children they were anxious as to what they would have to offer their loved ones.

Then they discovered that some of the unleavened dough which had from time to time been converted into bread during the forty days of the church season remained in the pan. Nellie, who was very frugal, thought that wasting anything was a great sin, so she suggested using this remaining portion of dough as a part of a cake for the expected guests. Simon, who readily agreed that the idea was a good one, reminded his wife that a small piece of Christmas pudding still remained hoarded up in the cupboard. It was his idea that this might be used as the inner part of a cake to surprise those who managed to cut their way through the outer crust.

So far so well, as both were pleased with their plan. But when the cake had been mixed a family quarrel ensued, for Simon wanted it boiled and Nellie insisted that it should be baked. Finally the old couple came to blows. Then honest Nell rose and threw the stool she had sat on at faithful old Sim, who returned the compliment by applying a besom to the head and shoulders of his spouse. Just as Nellie seized the broom to use on her partner cook the proposition was made that the cake should first be boiled and then baked, and so an agreement settled the difficulty. The mixture was put into a pot to boil over a fire made of the broken stool. After this it was coated with eggs broken in the scuffle and then it was baked by the heat of the burning besom and broom, until finally the new produce of confectionery was declared done.

All those who tested the cake enjoyed its delicious flavor and consequently the recipe was cast around. The next year many parents imitated the cake of Simon and Nellie, which soon sprang into general favor. For awhile the English people were content to call the confection "Simon and Nellie cake," but as time went on the last syllables of the names were dropped and the cake came to be known as "simnel." Later the habit sprang up for children to take "simnels" home on Mothering Sunday.

In the south of England parents who still anxiously await the reunions of their families on Mothering Sunday prepare a special dish for their enjoyment. This "furmety," as it is called, is made of wheat grains boiled for hours in sweet milk, then sugared and spiced and enriched with raisins. In the northern part of England and Scotland there is preference on this traditional Sunday for boiled peas fried in batter with pepper and salt. The pancakes made with these ingredients are called "carlings" and from their name the Sunday has long been known as "Carling Sunday."

HINTS FOR A HOME GARDEN IN YOUR OWN BACK YARD

WITH the advent of spring comes into the hearts and minds of even the "city folk" an impulse to get out and "dig in the ground." Nearly every householder, as he contemplates his twenty by thirty back yard, realizes, as never before, its splendid agricultural possibilities. He pictures the whitewashed boards of one side of the fence covered with the blooming vine of the lima bean and dwells fondly upon its later perfection when the beans may be pulled just a few minutes before they are cooked. In fact, he wonders how he could have ever before overlooked the remarkable utility of that patch of turf that is after all only a "city back yard."

And there are farming possibilities in the average yard of a Washington home, or so it is claimed by many gardeners and horticulturists. Among them is William R. Beattie, assistant horticulturist of the bureau of plant industry.

* * *

"Only a few hours' labor each week is necessary for the cultivation of a successful home garden," said Mr. Beattie recently. "A thorough irrigation—not a sprinkling—of the soil once a week is generally sufficient water for the garden. The earth must of course be worked and the weeds removed, but labor of this sort performed every five or six days is enough to keep the garden in good condition. Every home gardener should supply himself with the tools necessary to cultivate his little farm and he should be careful when planting his crops to see that the soil is rich and free from any stones, broken glass or other material.

"A great deal can be said as to the arrangement of a back yard," continued Mr. Beattie. "There are several very practical disadvantages to a yard that is devoted entirely to home-gardening. When the family laundry is done at home the clothes must of necessity be hung to dry in the yard, and the amount of walking to and fro in hanging the clothes may mean ruination to the crop. If the yard, however, is a fairly good-sized one, a portion of it may be planted with grass seed and at least four or five varieties of vegetables grown in the remaining part.

"In a well arranged back yard the walk leading from the house to the gate should extend along the side of the yard near the fence, thus leaving the ground as unbroken as possible. The various vegetables should be planted in rows several inches apart and running parallel to the walk. Thus practically all of the area of the yard can be planted in vegetables, leaving only sufficient room to walk between the rows while cultivating the soil. If there is a small stretch of lawn left between the walk and the other fence a little beauty may be added to the garden by the cultivation of rose bushes or any variety of flowers. But to me this seems rather a useless waste of ground, for lima beans may be trained along the fence and, in fact, any sort of a vegetable seems more to be desired in a back yard than flowers.

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"A great deal of the success of a garden depends upon its soil," continued Mr. Beattie. "The soil in the back yard of a newly completed city home is generally a coarse clay filled with bricks and mortar. About eight inches of this earth should be removed and replaced by a rich, thick soil. Two wagon loads of well decayed stable manure is, perhaps, the best fertilizer for the home garden, and is a sufficient quantity for the average back yard. If the ground is in fairly good condition, the clay soil need not be removed, but only spaded up and well covered with the fertilizer."

In sowing the seeds Mr. Beattie advocates a plan that is humorously expressed in an old saying well known among farmers:

"Just take about half the amount of seed required, and then on your way to the garden stump your toe and spill half of that. The seeds left will be just enough to plant successfully."

"Plants must have air and room to grow, as well as human beings," explained Mr. Beattie, "and a great deal depends upon the proper thinning of a crop. When thinning plants in the plant bed it should be the aim to remove the centers of the thick bunches, leaving the spaces as uniform as possible. When thinning the rows of seedlings in the garden the best plants should be allowed to remain, but due consideration should be given to the matter of proper spacing. Failure to thin plants properly will invariably result in the production of an inferior crop.

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"Garden seeds should always be sown in straight rows, regardless of where the planting is made. If a window box is employed for starting early plants in the house, the soil should be well firmed and then laid off in straight rows, about two inches apart. The same method holds good for planting seeds in a hotbed, cold frame or bed in the garden, except that the rows should be farther apart than in the window box. By planting in straight rows the seedlings will be more uniform in size and shape, and thinning and cultivating will be more easily accomplished. In all cases where the soil of the seed bed is not too wet it should be well firmed or pressed down before laying off and marking for sewing the seeds. After the seeds are sown and covered, the surface should again be firmed by means of a smooth board.

"No definite rule can be given for the depth to which seeds should be planted, for it varies with the kind of seed and, with the character and condition of the soil. When planting seeds in boxes or a bed the grooves in which the seeds are planted should be made with the edge of a thin lath.

"Lettuce, radishes, parsley and several other vegetables may be started in the house and successfully transplanted to the garden. They must, however, be hardened off before planting outdoors. By this process the plants are gradually acclimated to the effects of the sun and wind and it is usually accomplished by ventilating freely and by reducing the amount of water applied to the plant bed. The plant bed should not become so dry that the plants will wilt or be seriously checked in their growth. After a few days it will be possible to leave the plants uncovered during the entire day and on mild nights. By the time the plants are required for setting in the garden they should be thoroughly acclimated to outdoor conditions and can be transplanted with but few losses.

* * *

"Every home gardener should have in his tool chest several of the implements necessary for the cultivation of his crops. He can never successfully prepare the soil without the use of a spade. The hoe, the steel rake and the trowel are also necessary in a back yard garden. A line is necessary in order to make straight rows when planting the seeds. A watering can is, of course, included among the tools for the garden, though perhaps the best method of watering is to allow the hose to lie on the ground, with the water flowing gently, and move it from time to time to different parts of the garden, thus irrigating it thoroughly.

"Radishes, lettuce, onions, lima beans, parsley, garden beets and tomatoes are perhaps the most profitable crops for the home garden. They occupy very little ground and are surely more palatable when fresh. Lettuce thrives best during the early spring or late autumn and will not withstand the heat of summer. In order that the leaves may be crisp and tender, it is necessary to force the growth. Often in growing lettuce in the home garden the seeds are sown broadcast in a bed and the leaves are removed from the plants as rapidly as they become large enough for use. A much better method is either to thin or transplant the seedlings and allow the plants to form rather compact heads and then cut the entire plant for use.

"One quart of onion sets is sufficient to produce a crop for a family of four or five. Onions require frequent shallow cultivation. The onion sets should be planted about an inch deep and in drills twelve to eighteen inches apart and two to three inches apart in the row. Lima beans may be planted about every eight inches along a trellis or the fence; while they are not beautiful, they are much more useful than the morning-glory and honeysuckle vines that decorate so many of Washington's back fences.

"Tomatoes should be trained to stakes planted about two feet apart each way. By trimming the vines to a single stem they can be grown in a comparatively small space. A half dozen of these vines should supply a good-sized family. Every household should have a parsley bed, and even when the back yard is devoted only to flowers this little feathery green plant makes a very pretty border for a flower bed.

"Peas are easily grown, and form one of the most palatable of garden products. In preparing the soil for this crop, fertilizers that are high in nitrogenous matter should not be applied to the land immediately before planting, as they will have a tendency to produce too great a growth of vines at the expense of the pods. In fact, land that has been well manured the previous year is most satisfactory. Peas should be planted in the bottom of a furrow six inches in depth, and the seeds covered with not more than two of three inches of soil.

"After the plants attain a height of four or five inches the soil should be worked in around them until the trench is filled. The rows for peas should be three feet apart for the dwarf sorts and four feet apart for the tall kinds. In order to maintain a continuous supply of fresh peas plantings should be made every ten days or two weeks during the spring months, beginning as soon as the ground can be worked.

"Asparagus is a crop that can be grown on almost any well drained soil and it should have its place in the home garden. The seeds of asparagus may be sown during the early spring in the rows where the plants are to remain and the seedlings thinned to stand fourteen inches apart in the row at the end of the first season. It is usually more satisfactory to purchase two-year-old roots from some seedsman or dealer, and one to two hundred of these plants are sufficient to supply the ordinary family.

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"The roots should be transplanted during the autumn or early spring. In the necessarily limited garden space of a back yard the plants should be set about one foot apart each way. In setting the asparagus the crowns should be covered to a depth of four or five inches. In the autumn or at some time during the year the bed should receive a dressing of manure.

"It would be impossible to make an accurate estimate of the value of crops grown in the kitchen gardens of the United States," continued Mr. Beattie, "but from a careful observation the statement can safely be made that a well kept garden will yield a return ten to fifteen times greater than would the same area and location if devoted to general farm crops. A half acre devoted to the various kinds of garden crops will easily supply a family with $100 worth of vegetables during the year. One Washington man last year obtained from his back yard crops valued at nearly the one hundred mark.

"Perhaps the chief advantage in the home garden is the fact that the vegetables are not subjected to exposure in the markets or in transportation and are not liable to become infected in any way. Many vegetables lose their characteristic flavor when not used within a few hours after gathering. By means of the home garden the production of the vegetable supply for the family is directly under control, and in many cases is the only way whereby clean, fresh produce may be secured. The home vegetable garden is worthy of increased attention, and a greater number and variety of crops should be included."